

5. If the equipment does not meet the standards of performance within sixty (60) consecutive working days after the start of the acceptance testing, the State shall either, invoke the options as shown in paragraph 4. above, or terminate the order (or portions thereof) and seek relief as provided by Paragraph 26, of the Terms and Conditions "Rights and Remedies of State for Default".
6. During the successful performance period, a minimum of 40 hours of operation use time shall be required as a basis for computation of the average level of availability. However, in computing the availability level, the actual number of operational use hours shall be used when in excess of the minimum stated above.
7. At the request of the Contractor, the State shall make available not only the failed equipment, but also those machines which must be utilized by the Contractor to identify the cause of failure and to accomplish the repair.
8. Equipment shall not be accepted by the State and no charges associated with such equipment shall be paid by the State until the equipment has satisfactorily completed the acceptance tests.
9. Immediately upon successful completion of the acceptance tests, the State will authorize appropriate payment. The State shall maintain adequate daily records to satisfy the requirements of acceptance testing.
10. In no event will equipment be returned under this paragraph where the State has damaged the equipment, rendering the equipment unsuitable for resale.

B. Acceptance Testing of Software (other than Operating Software)

1. Immediately upon delivery by the Contractor of a software product, the State shall test such software product, in accordance with the following:
2. On the first State workday following the day of delivery, or installation, by Contractor, the State shall thoroughly test such software to be assured that the software performs in substantial accordance with the manufacturers published specifications and, if purchased as a result of a **network** design by the vendor, to ensure the software is adequate to accomplish the tasks identified in the Network Planning Guide or Questionnaire.
3. If successful completion of the acceptance test is not attained within thirty (30) calendar days after the start of the acceptance testing, the State shall have the option to request substitute software, cancel that portion of the **contract** which relates to the unaccepted software, and receive a refund of any moneys paid to the vendor, or continue the acceptance tests. The State's option shall remain in effect until such time as the tests are successfully performed, 60 consecutive working days from date of delivery or installation, whichever occurs first.

4. If the software does not meet the standards of performance within thirty (30) consecutive working days after the start of the acceptance testing, the State shall either, invoke the options as shown in paragraph 3. above, or terminate the order (or portions thereof) and seek relief as provided by Paragraph 26, of the Terms and Conditions "Rights and Remedies of State for Default".
5. Software shall not be accepted by the State and no charges associated with such software shall be paid by the State until the software has satisfactorily completed the acceptance tests.
6. Immediately upon successful completion of the acceptance testing, the State will authorize appropriate payment. The State shall maintain adequate records to satisfy the requirements of acceptance testing.

U1. SOFTWARE LICENSE

1. For each software product to be carried in the Store, the Contractor will provide to the State, at the time of delivery of the software, the standard software license issued by the proprietary owner of the software.
2. In the event any of the licenses contain provisions unacceptable to the State, the Contractor agrees to give his best efforts to assist in obtaining acceptable alternative license provisions from the proprietary owner of such software product.
3. The Contractor shall, in the event of a software manufacturer's release of upgrades to software. products carried by the Store, provide such upgrades as part of the Store's available products. In those instances where the software manufacturer is normally the only source for the software upgrades available through the Store, the *Contractor shall make every reasonable effort to make the software upgrades available through the store.*
4. The Contractor agrees to add software site licensing programs with major software manufacturers if agreed upon by the State and the software manufacturers.

V1. TRANSITION

1. The supplier agrees that at the end of this contract, should the State conduct another procurement and award a new contract, the supplier will work with the State's Contract Administrator ensuring that an efficient and effective transition takes place.

XI. SMALL BUSINESS

1. Supplier(s) will provide the States Contract Administrator with State of California Small Business Certification for all subcontractors that claim to be a Small Business.
2. When requesting to add a Certified Small Business subcontractor to this agreement, the Small Business Certification letter must accompany the request.
3. All Certified Small Business subcontractors must be identified as such in the electronic, hardcopy and CD ROM catalog.
4. By the *fifteenth (15th)* workday of each month, or the next workday thereafter, supplier must provide the State a report showing, for each ordering agency, the dollar volume of sales by Certified Small Business.
5. *The Supplier agrees to work with the State Contract's Administrator to establish procedures regarding the pass through credit of small business participation to customer agencies.*

PART TWO

A2. TECHNICAL REQUIREMENTS

1. Supplier must propose and maintain complete manufacturer product lines for the term of the contract. In proposing the product line for a manufacturer of system units or if offering UNIX workstations, the supplier must propose monitors, keyboards, printers, disk drives, laptops, network interface cards, network wiring equipment, tape backup units, and other available equipment within the product lines.
2. Upon request, the supplier agrees to submit manufacturer's technical literature for any or all systems **and** products proposed. Technical literature for any product or service must be supplied to State RFP evaluation team within five working days of request. If the manufacturer's literature does not verify all the technical specifications, the supplier must certify the product meets the RFP specification. These certifications that the proposed product meets the RFP requirement are binding on the supplier.
3. It is the supplier's responsibility to notify the State in writing of any situation where the suppliers response to this RFP does not or may not fully comply with any requirement of this RFP. Failure to do so may be treated as a material deviation and result in rejection of the supplier's proposal.

B2. SYSTEM UNITS

1. Supplier agrees to provide, at a minimum, the following four manufacturer brands of system units: Compaq, Hewlett Packard, IBM and Toshiba. These manufacturers are based on the current purchasing pattern of state agencies. Additionally, these product lines must encompass both single and network capable units.

c2. WINDOWS NT/2000 WORKSTATIONS

1. Supplier agrees to provide, at a minimum, the following two manufacturer brands of Windows NT/2000 Workstations: Hewlett Packard and IBM

D2. PERIPHERAL EQUIPMENT

1. The supplier agrees to provide at a minimum, product lines from Compaq, IBM, Sony and Hewlett Packard.
 - a line of internal and external hard disks in a range of sizes
 - a line of internal and external floppy disks in **all** sizes and formats
 - a line of CD ROM in all sizes and formats


2. In addition to the product lines from the system unit manufacturers, the supplier agrees to provide a product line from at least two other monitor manufacturers whose product line includes at least two:
 - Super VGA color monitors for DOS/Windows environment system unit
 - Color monitors for Macintosh environment system unit
 - Low emission monitors
 - Low energy or recyclable (Federal EPA Standards)
3. Supplier agrees to provide at least two manufacturer brands of plotters.
4. Supplier agrees to provide at least three manufacturer brands of scanners.
5. Supplier agrees to provide product lines from at least two manufacturer brands of external modems.

E2. ADD-ON BOARDS, MEMORY AND MEMORY UPGRADES

1. In addition to the internal boards available from the system unit manufacturers, the supplier agrees to provide at a minimum product lines from Kingston and MPM Goldenram and other *manufacturers* whose combined product lines include, at a minimum:
 - internal modems and data/FAX modems
 - video/display boards
 - accelerator boards
 - printer controller boards
 - multifunction boards
2. Supplier agrees to maintain for the term of the contract, memory and memory upgrades for all system units proposed. In addition, supplier agrees to provide two additional manufacturers of memory and memory upgrades.

F2. NETWORK EQUIPMENT

1. In addition to the network equipment available from the system unit manufacturer, the supplier agrees to provide product lines from at least three manufacturers of network equipment capable of running with the network operating systems provided, whose combined product-lines include at least the following items:
 - Network Bridges
 - Network Routers
 - Network Gateways

- 
2. In addition to the network interface cards 'available from the system unit manufacturers, the supplier agrees to provide product lines from at least three additional manufacturers of add-on boards whose combined product lines contain Network Hubs, Network Concentrators and Network Interface Cards compatible with the system units provided and with software drivers for the network operating systems proposed.
 3. In addition to the product lines provided for above, the supplier agrees to provide product lines from at least three manufacturers of network interface cards compatible with the hubs and concentrators from the manufacturers provided above, and compatible with the system units.
 4. The network interface cards provided must support IEEE 802.5 Token Ring running on shielded and unshielded twisted pair wiring or IEEE 802.3 Ethernet running on thin coaxial and unshielded twisted pair wiring. Cards supporting unshielded twisted pair wiring shall be 10 Base T.
 5. In addition to the network interface cards available from the system unit manufacturers, the supplier agrees to provide the product lines from at least three additional manufacturers of add-on boards whose product line of network hubs, network concentrators, and network interface cards support Local Talk running on unshielded twisted pair wiring and be compatible with all system units provided for the Macintosh environment.

G2. HOST COMMUNICATIONS

Supplier agrees to provide at least three manufacturers of host communication products whose product lines contain 3270 and VT emulation products and will work in the Macintosh and Windows environments.

H2.. PRINTERS

1. In addition to the printers from the system unit manufacturers, the supplier agrees to provide product lines from at least two other printer manufacturers.
2. Within the product lines from all printer manufacturers, including the system unit manufacturers, the supplier agrees to provide at least two manufacturer brands of laser printers.
3. Within the product lines from all printer manufacturers, including the system unit manufacturers, the supplier agrees to provide at least one printer product line with two or more models supporting the HP PCL page description language.

4. Within the product lines from all printer manufacturers, including the system unit manufacturers, the supplier agrees to provide at least one printer product line with two or more models supporting the Post Script page description language.
5. Product lines must include color printers using color ink jet and/or dye sublimation printing methods.
6. Supplier agrees to include levels of mid to high-end color laser printers.

12. ACCESSORIES

1. Supplier agrees to provide at least two manufacturers of other accessory equipment whose combined product lines typically contain:
 - anti-theft locking devices for each model system unit
 - disk holders for all disk sizes
 - power devices
 - installation kits
 - special expansion devices
 - cables for connecting peripheral equipment to all system units proposed
 - sheet feeders and paper trays for printers proposed
 - monitor anti-glare devices with and without grounding protection from EM
 - printer font cartridges for each type of printer proposed
 - printer stands, covers, and enclosures
2. Supplier agrees to provide the product line from at least two manufacturer brands of external surge protectors whose combined product line contains at least one six socket surge protector.

J2. SOFTWARE

1. The supplier agrees to provide desktop software products for the Windows and Macintosh, both single user and network versions.
2. At a minimum, supplier agrees to maintain for the term of the contract, the following network operating system product lines: Novell, Windows 2000, Windows NT, and Macintosh.
3. During the term of the contract, supplier agrees to work with the State Contract Administrator to institute software site licensing programs.
4. No **groundup** software development is allowed in this contract.

K2. SUPPLIES

Supplier agrees to provide supplies either through the store or through a sub-contracting partnership. At a minimum, **the** supplier must propose:

- a full line of printer supplies including ribbons, etc., for each printer proposed

- diskettes in all sizes for proposed system units
- backup tape cassettes or cartridges
- paper including labels and transparency materials

L2. PRIME CONTRACTOR RESPONSIBILITY

The Prime Contractor accepts full responsibility for coordinating and controlling all aspects of the contract, including support to be provided by any sub and/or secondary contractors, and will be the sole point of contact with the State relative to contract performance. If this performance involves the use of one or more program products proprietary to another supplier, the Prime Contractor will be responsible for acquiring a license for the State's use of such program products. If any proposal includes equipment or services provided by other firms, it will be mandatory for the bidder to act as Prime Contractor for the delivery, and maintenance of the entire system.

In all contractual matters, the State considers the Prime Contractor to be the sole point of contact. There will be no assignment of financial documents to a third party without prior written DGS approval.

M2. ***REQUIREMENT DELETED***

A3. Customer Service Center

In responding to the RFP, supplier must discuss the proposed site.

1. For each Customer Service Center facility proposed, suppliers must provide the following information:

- ✧ A narrative description of how the bidder will structure the customer service center and the staff at start up of contract, and how the bidder will handle the fluctuation of business
- ✧ A plan of the proposed State Computer Store's Customer Service Center site which indicates layout
- ✧ A quality assurance program to monitor and ensure that the Customer Service Center is providing quality service., This can be accomplished through regular intervals of satisfaction surveys or other approved methods that provide comprehensive feedback on all aspects of the State Computer Stores, which verifies Contractor performance.
- ✧ A narrative description of how the State Computer Store customers will be accommodated
- ✧ Telephone and e-mail support which will provide store customers with prompt telephone or e-mail access for consultation, design, pricing, order status, product comparisons, compatibility information and return information



"We're very proud of what we have done. I like the quality of GE Capital Information Technology Solutions' service, their attention to detail, and their fast delivery. They are a partner in our success. "

*Anwar Nathu
Vice President of Management Information Services
The Loewen Group, Inc.*



In this section, GECITS presents information pertaining to our Customer Service Center. To address the requirements specified in RFP Section VI, Requirement A3, within the context of the RFP evaluation criteria, we have organized our response according to the following headings:

- Introduction
- Customer Service Center Plan
 - Customer Service Center Structure
 - ✍ Customer Service Center Layout
 - ✍ Staff at Start-Up
 - ✍ Handling Fluctuations in Business
- Quality Assurance Program
- Description of How Customers will be Accommodated
- Telephone and E-Mail Support
- summary

Introduction

GECITS is committed to providing the pinnacle of customer service and satisfaction to the State Store and its customers. Whether the State selects one, two, or three suppliers to support the State Computer Store, GECITS has the resources to successfully support all State Store customers.

Customer Service Center Plan

In order to effectively discuss the elements of our Customer Service Center Plan, we have organized our response into the following headings:

- Customer Service Center Structure
- Customer Service Center Layout
- Staff at Start-Up
- Handling Fluctuations in Business

Customer Service Center Structure

GECITS will provide customer service support to the State Computer Store from two locations: our **Rancho Cordova** facility and the GECITS Intellicenter facility. In the following subsections, we discuss the structure of each facility.



Rancho Cordova Facility

GECITS will support **the** State Store locally from a 3,000 square foot facility in Rancho Cordova. Figure A3-1 illustrates the front of this facility. Approximately 2,500 square feet of this facility will be dedicated to State Store use. The address for this facility is 10901 Gold Center Drive, Rancho Cordova, CA, 95670.

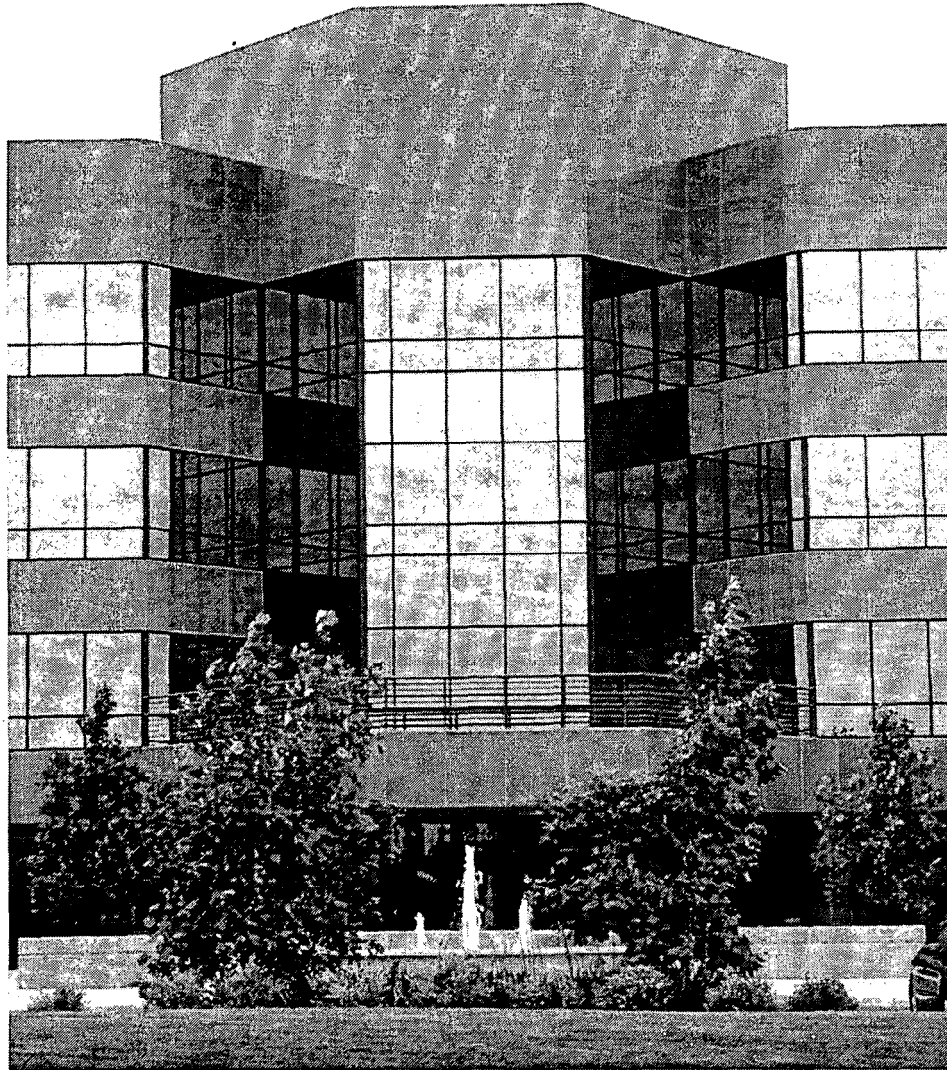


Figure A3-1. GECITS Rancho Cordova Facility



The **Rancho Cordova** facility will support our entire State Store team, except for the customer service/inside sales representatives who will work out of the GECITS Intellicenter facility.

The GECITS **Rancho Cordova** facility will be open to customers Monday to Friday ~~from~~ 8:00 a.m. to 5:00 p.m. Pacific time. This facility will be in a convenient location, about 15 miles from the heart of downtown. There will be ample free parking available for customers who visit the facility.

GECITS also has two other California offices (Oakland and Santa ~~Ana~~) that can assist in providing additional statewide sales, marketing, and service support. Staff from these offices can work jointly with our State Store account/sales managers to call on customers in the Bay Area and in Southern California, thus optimizing our statewide efforts.

GECITS Intellicenter Facility

The GECITS Intellicenter is an 84,000 square foot, state-of-the-art facility in Erlanger, Kentucky that we designed to consolidate our core customer functions under one roof. As mentioned above, the only members of our State Store team that will work out of the GECITS Intellicenter will be our customer service/inside sales representatives. Figure A3-2 illustrates the **front** of this facility.





Figure A3-2. GECITS Intellicenter

The GECITS Intellicenter took almost two years to construct, and includes 20,000 tiles of raised flooring that allows easy relocation of network, phone, and power lines to the more than 700 workstations in the facility. Secured access ensures 24/7 safety standards for all customer data. More than 143 miles of Category 5 cable lie underneath the flooring. This cable allows high bandwidth communication, thus providing clear data flow up to video grade transmissions. Two UPS systems protect the entire facility, providing up to 26 hours of uninterrupted power. A Lucent Technologies phone system provides up to the second data on all calls, call load factors, and hold times to ensure we meet rigorous service efficiency goals. GE's Six Sigma Quality tools are used to measure all functions, with metrics prominently displayed throughout the facility.

Customer Service Center Layout

In the following subsections, we present the layout of our Rancho Cordova facility and the GE Intellicenter facility.



Rancho Cbrdova Facility Layout

Figure A3-3 illustrates the floor plan of our Rancho Cordova facility.

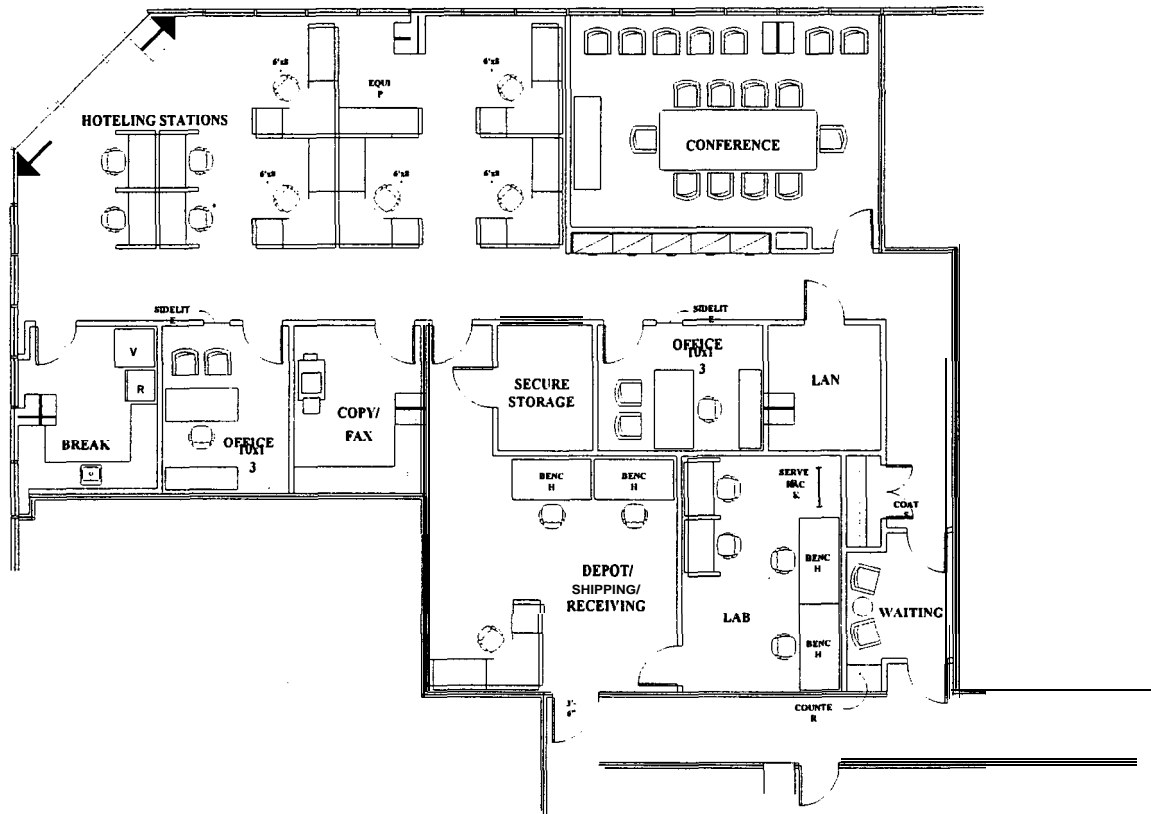


Figure A3-3. GECITS Rancho Cordova Facility Floor Plan

A reception/waiting area will be located immediately upon entry. The facility will include a training/conference room, an office for the general manager, and an office for the service manager and the operations manager to share. It will also include a lab, depot/shipping/receiving area, storage area, LAN room, copy/fax room, and break room.



GECITS will utilize the lab for testing equipment and for training purposes. Specifically, we will be able to test equipment, from multiple vendors, in order to give our customers solution options. In addition, we will be able to train customers on new products, which will allow them to experience new hardware/software before it goes “live” at their site.

We will set up separate areas of the facility with cubicles, or “hoteling stations,” for the remainder of our sales and technical personnel. Our sales and technical staff will utilize hoteling, as they will be out of the office as much as possible, working with customers.

GECITS Intellicenter Facility Layout

Figure A3-4 and FigureA3-5 illustrate the first and second floors respectively of the GECITS Intellicenter.



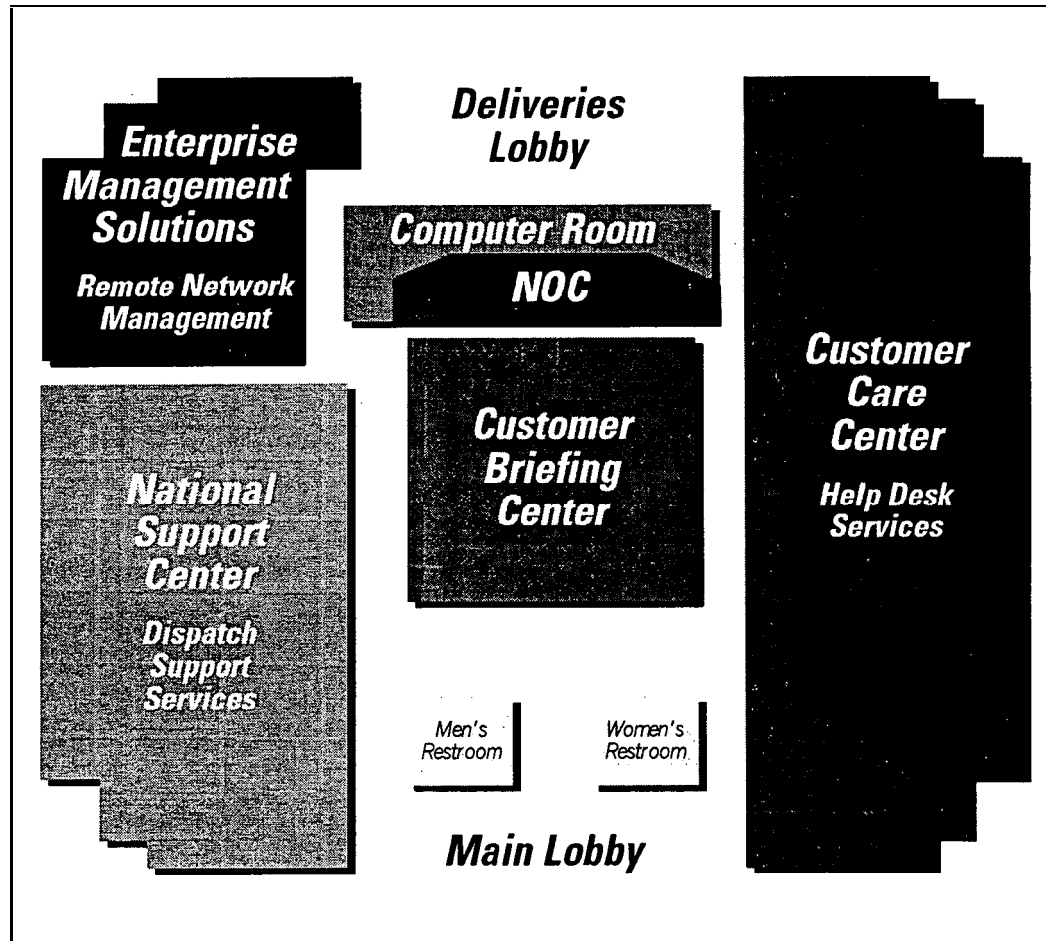


Figure A3-4. GECITS Intellicenter – First Floor

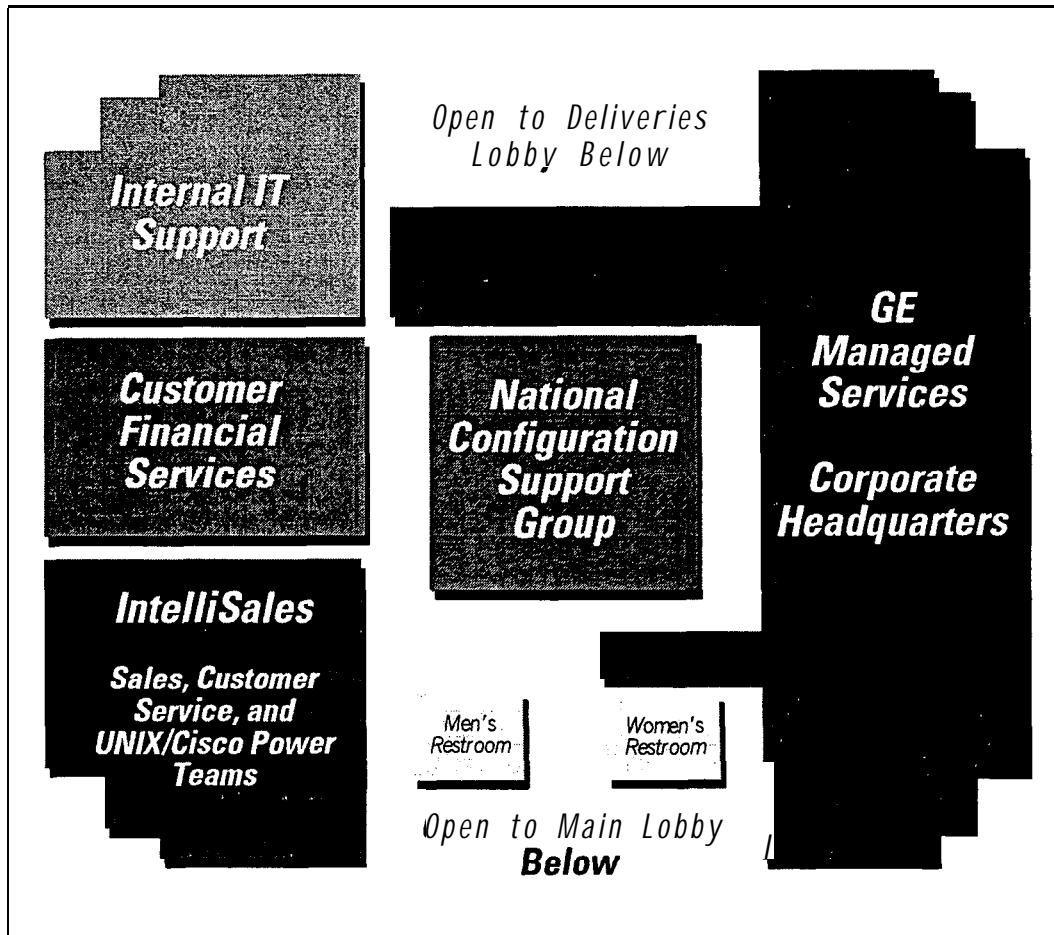


Figure A3-5. GECITS Intellicenter – Second Floor

Below, we provide a description of each of the areas identified in the previous figures:

- ❑ Enterprise Management Solutions (EMS) and NOC- The Enterprise Management Solutions Group provides remote network management and monitoring services via a state-of-the-art Network Operations Center (NOC). In the NOC, GE's network management staff provides remote management and monitoring services that help to ensure customer network up-time. Each customer is protected with its own circuit, and the NOCs isolated network and policies provides additional security for each customer no matter where they are located.
- ❑ National Support Center (NSC)- GECITS' Help Desk Services, which is within the Intellicenter Customer Care Center (CCC), can resolve up to 85% of all issues. But inevitably, some calls will require a technician on-site, and this support is dispatched through the National Support Center. The National Support Center interfaces with on-site support teams - whether they are a customer's own employees, an on-site GECITS team, or a third party. However, if a customer's smaller satellite offices do not require full-time technicians, technicians can be dispatched. This dispatching activity is managed by a team of technically certified agents who work efficiently to triage hardware problems, recommend parts, dispatch and manage our GE field technicians, and interface with a customer's main support organization.
- ❑ Customer Briefing Center- The Customer Briefing Center was designed to be a "state-of-the-art" yet comfortable meeting room where customer's can plan the details of their relationship with GECITS.
- ❑ Customer Care Center (CCC)- The Customer Care Center houses GECITS' Help Desk Services. This single point-of-contact (SPOC) help desk not only logs and tracks all calls, but by using specialized tools, they also resolve a large percentage of trouble tickets, thus reducing the amount of escalations required. Of course, when issues cannot be resolved over the telephone, the help desk analysts will route them to the appropriate support teams and track the resolution end-to-end. Standard application support (shrink-wrap) questions and related answers are a "given" for this team, however, custom client/server and mainframe application support is their specialty.



- ❑ Customer Financial Services (CFS)- The GECITS Customer Financial Services team works hand-in-hand with our customer financial personnel. By establishing the appropriate credit parameters for our customers, they offer flexible financing on orders.
- ❑ IntelliSales – The IntelliSales group provides sales and customer service support, and support to the UNIX/Cisco Power Teams. As previously mentioned, the GECITS customer service/inside sales representatives will augment our local State Store team by providing order entry and order management services. The IntelliSales group maintains a large staff of customer service/inside sales representatives that supports customers nationwide. This includes five customer service/inside sales representatives that are dedicated to, and are already in place to support the State Store contract. These individuals understand the business practices and IT issues of the State and the State Store customers. We provide additional information pertaining to our customer service/inside sales representatives later in this section under the heading, “Description of How Customers will be Accommodated.”
- ❑ GE Managed Services - This area of the Intellicenter houses the GE Managed Services executive management, finance, and marketing staff GE Managed Services is a line of business within GECITS that provides a full range of reliable, value-added support services to help control and maintain multi-vendor IT technology. Their “best-in-class” services include Help Desk, Remote Network Management, Disaster Recovery, Asset Management, Education Services, Storage Services, Security Services, Server Services, and a host of technological enablers.
- ❑ National Configuration Support Group (NCSG) - Consistency across an enterprise takes planning and expertise, and our National Configuration Support Group makes sure a customer’s custom configurations are stored and loaded on the appropriate units, This group works with each customer to analyze their hardware and software requirements for desktops, laptops, and servers to create maximum efficiency and productivity.



Staff at Start-Up

The number of GECITS State Store staff at contract start up will be 29. The Rancho Cordova facility will support our entire State Store team, except for the customer service/inside sales representatives who will work out of the GECITS Intellicenter facility. We provide more information regarding our proposed staff in the section entitled, "Supplier Organization and Staffing."

Handling Fluctuations in Business

GECITS will be able to easily handle fluctuations in business, as our proposed staff will be cross trained to handle numerous functions, and we will have access to additional pools of sales and technical resources nationwide to supplement our efforts. Our capability to provide extended support was demonstrated during the peak-purchasing season in 2000, when GECITS had 15 customer service/inside sales representatives supporting the State Store contract.

Qualify Assurance Program

GE is widely recognized as having one of the most sophisticated and successful corporate quality programs. At the core of our program is Six Sigma. We discuss Six Sigma, as well as how we will use it as the basis of our quality assurance program for the State Computer Store contract, in the following sections:

- ☐ Six Sigma Overview
- ☐ Performance Tracking and Problem Identification
- ☐ Addressing Deficiencies
- ☐ Quality Activities in Support of the State Store

Six Sigma Overview

As Stated by Jack Welch, General Electric Company Chairman of the Board and CEO, "The centerpiece of our dreams and aspirations for this great company is the drive for Six Sigma quality. Six Sigma is a disciplined methodology, led and taught by highly trained GE employees called Master Black Belts, that focuses on moving every process that touches our customers – every product and service – to near perfect quality."



GE's Six Sigma is designed to achieve near-perfect quality in all of our products and services. Six Sigma is both a management philosophy and a way of measuring the capability of processes. As a management philosophy, Six Sigma represents our resolve to pursue world-class standards for quality and customer satisfaction. Achieving Six Sigma means our processes are **error-free** and consistently meet or exceed customer requirements.

Our ultimate goal is to achieve "World Class" quality. "World Class" means all-around excellence, and consistently and completely meeting customer expectations. Few other companies can match GE's commitment to continuous quality improvement.

Six Sigma starts with the premise that you cannot improve what you do not measure, and Six Sigma provides statistical tools to allow for measurement. The ultimate goal of Six Sigma is to improve performance and product yield by reducing the number of defects inherent in every product, process, or procedure. The higher the sigma value, the less likely a process will produce defects. As sigma increases, cost go down, cycle time goes down, and customer satisfaction goes up. When a process reaches Six Sigma, it is capable of only 3.4 defects per 1,000,000 product and/or service transactions. To achieve this, we focus our efforts equally on our customers, our processes, and our employees.

So what will Six Sigma mean to the State? It will mean consistent performance. Ninety-nine percent reliability is considered to be a good degree of accuracy, in other words, one miss out of every 100 attempts. However, at GE, that percentage is not good enough. GE is striving to hit the mark 99.99966% of the time (only 3.4 errors out of every 1,000,000 tries).

There are some key elements of GE's approach to achieving Six Sigma quality:

- ☐ Quality is ~~defined~~ in relation to customer requirements for, both products and services
- ☐ The goal is to achieve complete customer satisfaction
- ☐ **Quality is** a measurable outcome or level of achievement

Because the customer is the ultimate judge, a key aspect of GE's Quality program is obtaining Voice of the Customer(VOC) data that can be translated into measurable customer requirements that we call Critical to Quality (CTQs). Every Quality activity in GE is designed to improve our performance toward specific customer CTQs such as the timeliness of product delivery or the accuracy of service repairs.



GE uses a structured, disciplined methodology called DMAIC (Define, Measure, Analyze, Improve, Control) to achieve Six Sigma quality. DMAIC involves initial problem definition, measurement, rigorous analysis, fact-based improvement, and ongoing process control. Use of a structured methodology such as DMAIC helps ensure that the root causes of problems are identified, improvements are properly targeted toward those root causes, and adequate controls and measures are in place to ensure that customer CTQs are met on an on-going basis.

Figure A3-6 identifies the DMAIC steps. This model is powerful because it focuses on fixing the problem, and not fixing blame. Following Figure A3-6, we describe each of the five steps in detail.

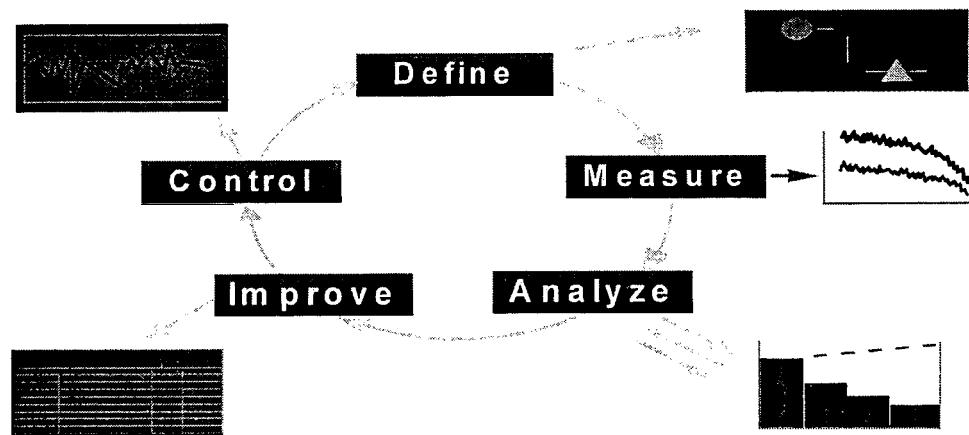


Figure A3-6. DMAIC Steps

- ❑ **Step 1 - Define:** In the Define stage, the customer, with the assistance of a Master Black Belt (a GE quality consultant that drives quality improvement projects), defines quality in terms of measurable performance objectives called CTQs. CTQs are those elements that in the customer's mind are Critical to Quality.
- ❑ **Step 2 - Measure:** In the Measure step, measurement tools are developed, often taking the form surveys, reports, or dashboards that clearly measure actual performance against the goals established in the Define stage. Defects (incidents when CTQs are not met) are measured against a statistical figure called Six Sigma which represents "near perfection," or 3.4 defects per 1,000,000 opportunities.

- ❑ **Step 3 - Analyze:** Grounded in the context of the customer and competitive environment, analysis is used to organize data and look for process problems and opportunities. This step helps to identify gaps between current and goal performance, prioritize opportunities to improve, **identify** sources of variation, and identify the root cause of problems.
- ❑ **Step 4 - Improve:** In the Improve step, we design, develop, and implement changes that will produce performance consistent with goal commitments.
- ❑ **Step 5 - Control:** In Step 5, Control, we ensure that the process improvements, once implemented, will “hold the gains” rather than revert to the same problems again. Various tools such as statistical process control tools can be used. Other tools such as procedure documentation and resource management helps institutionalize the improvement.

To achieve Six Sigma quality, GE has built a quality deployment **infrastructure**. Every employee in the company has received some level of Six Sigma quality training. Our senior leaders have been trained in the DMAIC methodology and their role as champions of this initiative. GECITS has numerous quality consultants called Master Black Belts and Black Belts throughout the company who drive quality improvement projects.

From the chairman on down, quality and customer satisfaction is the reason we come to work each day at GE. Process improvement is encouraged at a grass-roots level, as well as at the management level. All employees are encouraged to improve our business processes and to increase productivity.

GECITS has worked diligently to make progress on our journey to Six Sigma. Our quality levels today are equal to or better than our competitors -- our customers tell us so. When a customer contracts for our services, they can rely on GE to track the data on all service performance, and receive easy to understand reports showing exactly how we are performing against our commitments.

World Class Quality is our next great opportunity as a company and the Six Sigma program is designed to help us get there.

Performance Tracking and Problem Identification

A key tactic used by GECITS to detect problems is to track our performance over time using tools such as dashboards or control charts.



Dashboards are illustrations that incorporate the regular reporting of metrics. In order to develop the dashboards, we first sit down with the customer to identify their requirements, needs, and expectations. We then use this information, again working with the customer, to identify what performance areas will be measured, how we will measure them, and how we will present them on the dashboard. Control charts are simply statistical techniques used for monitoring and evaluating variations in a process. They are represented by the normal curve turned on its side, and identify the allowable range of variation for a particular service characteristic.

Dashboards and control charts allow us to observe whether performance is improving, deteriorating, or generally staying the same over time. If a given performance metric spikes up or down in a particular time period, maintaining these tools helps us to identify a shift as a possible aberration (what we call “special cause” variation), rather than the start of a trend (what we call “common cause” variation). This difference is important because we use different approaches to correct an issue depending on whether the variation is caused by special causes versus common causes.

Special cause variations are best resolved by investigating the cause of the variation during a particular time period, and making quick-hit-type changes. For example, a service metric may show poor performance in one month when all other months have shown good performance. Upon investigation, we discover the special cause to be the absence of a technician on high-volume call days with no planned back-up. An appropriate solution would be the creation of a back-up plan to accommodate unexpected technician absences. We monitor the impact of this change through the dashboards and/or control charts.

If the dashboards or control charts show consistent problems in a particular metric, we then suspect common causes or a basic deficiency in the overall process. These problems require more in-depth work to resolve and will often result in a formal GE quality project using the DMAIC methodology. For example, if a performance evaluation form showed consistently low scores in service delivery timeliness, a DMAIC project would be the best approach to use to resolve those problems.

Use of a structured methodology such as DMAIC to resolve more complex problems is important because it helps ensure that the solutions implemented will actually achieve the desired results.

A variety of tools are available in the DMAIC methodology to ensure identification of the root cause of the problem. For example, the data from performance evaluation forms might be segmented by location, technician,



service type, etc., to better isolate the source of the problem. Yet another tool would be to have process participants conduct a cause and effect (root cause) analysis to brainstorm causes for poor process performance, as well as possible solutions. Once the project team has identified the root cause, solutions appropriate to that root cause are developed and implemented. Controls and measures are adopted to ensure that the solution remains in place and obtains the goals desired. Ongoing monitoring using the dashboards and/or control charts is also used to determine if the solution implemented is positively impacting the customer and resulting in higher scores.

Addressing Deficiencies

Once feedback is received from the customer base, a Master Black Belt will analyze the data from the various measurements taken and perform **root-cause** analysis to determine what needs to be done to fix the real process problems. For example, if surveys show service response time is slowing, the Master Black Belt, using the DMAIC methodology, **determines** whether we need more technicians, or better dispatching, or something entirely different. The goal is to identify the true source of a problem before suggesting solutions using proven DMAIC tools. Once the root cause of the problem is identified, solutions appropriate to that cause can be implemented. This is the Improve step of the DMAIC methodology. The methodology then evolves into the Control step where appropriate measures and processes are put in place to “lock in” the solutions and to ensure that the problem does not recur.

Six Sigma and the DMAIC methodology are very well defined and institutionalized within the GECITS culture. They foster continual improvement that works to benefit our customers, our suppliers, and our company.

All serious, process related performance issues appearing on the quality reports will be addressed in a timely manner using the DMAIC methodology. However, not all problems are serious or complex enough to require a complete DMAIC analysis, but they need to be resolved none-the-less. Some issues are very tactical in nature, specific to an individual customer or incident. Even here we endeavor to stick to the process. Every customer service/inside sales representative and Account/Sales Manager is trained in the Six Sigma Quality process, as well as several other GE problem resolution methods that can be used to resolve issues systematically and ensure the issues do not recur. **Also, as** part of their ongoing training, customer service/inside sales representatives and Account/Sales Managers receive three-day refresher courses annually on problem resolution and on how to use these tools in everyday situations.

